Applying Supercomputing Methods to Multicriteria R&D Planning Problems

Submitted for Presentation at the
1993 Operations Research Society of America (ORSA) Conference
Session 011 Multicriteria Decision Making

Hyatt Regency Hotel
Phoenix, Arizona
October 31-November 3, 1993

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ABSTRACT

During the past twmty-five years there has been considerable research activity on what is loosely termed the Research and Development (R&D) project selection or "R&D planning problem." The influence of risk and uncertainty on the allocation of resources coupled with time varying aspects of the environment make this a formidable problem. R&D planning problems are generally characterized by multiple objectives, multiple criteria, multiple constraints, and uncertainty. This study examines the R&D Planning problem using high-performance supercomputing methods. A network of candidate subsystems and technology elements within each subsystem is analyzed in an applied setting. The results of a number of numerical experiments are reported.

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